

REMARKS

In addition to the amendments and remarks presented in the Response After Final dated September 40, 2002, and entered by incorporation in the CPA filed October 30, 2002, Applicants respectfully submit the following arguments for the Examiner's consideration. Because Applicants seek to further clarify the patentable features of the invention, the previously asserted remarks for the § 102 rejection (below) are presented with the newly added remarks appearing underlined for the Examiner's convenience.

Section 4: Rejections under 35 U.S.C. §102

Claims 9, 11, 14, 19-20, and 22 have been rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,192,028 to Simmons et al. (hereinafter referred to as Simmons). To anticipate a claim, the prior art reference must teach every element of the claim. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Verdegaal Bros. v. Union Oil of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Applicants respectfully submit that claims 9, 11, 14, 19-20, and 22, as amended, are not anticipated by Simmons for the reasons and explanations set out below.

As to the amended claim 9, Applicants respectfully submit that Simmons does not teach, disclose, or suggest the following element:

"a network interface, coupled to the buffer, to receive a plurality of frames from a plurality of communication links, to store the frames in the corresponding plurality of records within the buffer in order of receipt, and to assign a pointer value to each of the plurality of records denoting a relative order of frame transmission of each of the plurality of frames, *the pointer value associated with each record in the buffer being*

used to determine an order in which the corresponding frame is promoted from the buffer to a system state” (emphasis added)

Simmons discloses a network switch which has a shared memory architecture for storing data frames and a set of programmable thresholds to specify when flow control should be initiated on a selected network port (Simmons, Abstract). Specifically, Simmons states that the network switch includes a queue for storing free frame pointers, each specifying available memory locations in an external memory for storing data frames received from a network station (Simmons, Abstract). Furthermore, Simmons discloses that the network switch takes a frame pointer from a free buffer queue for each received data frame and stores the received data frame in the location in external memory specified by the frame pointer while a decision making engine within the switch determine the appropriate destination ports. (Simmons, Abstract). In particular, Simmons discloses that data packets from a network station are received by the corresponding MAC port and stored in the corresponding receive FIFO. The received data packets is output from the corresponding receive FIFO to the external memory interface for storage in the external memory (Simmons, Col. 6, lines 5-20). Simmons also states that the header of the received packet is also forwarded to a decision making engine which comprises an internal rules checker and an external rules checker interface to determine which MAC ports will output the data packet (Simmons, Col. 6, lines 21-24). The internal rules checker and external rules checker provide the decision making logic for determining the destination MAC port for a given data packet (Simmons, Col. 6, lines 29-32). Simmons further states that the rules checker, based on information in the header, determines from where the frame packet will be cast, i.e., through which port or ports will the frame packet be transmitted (Col. 7, lines 47-56).

However, Simmons does not disclose or suggest the above recited element of claim 9. Specifically, Simmons does not disclose or suggest a network interface, coupled to a buffer, to receive a plurality of frames from a plurality of communication links, to store the frames in the corresponding plurality of records within the buffer in order of receipt, and to assign a

pointer value to each of the plurality of records denoting a relative order of frame transmission of each of the plurality of frames, *the pointer value associated with each record in the buffer being used to determine an order in which the corresponding frame is promoted from the buffer to a system state* (emphasis added). In fact, as described above, Simmons explicitly discloses that the data packets received from a network station are stored in a corresponding receive FIFO (First-In-First-Out) buffer in the order in which each packet/frame is completely received and then output from the corresponding receive FIFO buffer to the external memory interface for storage in the external memory. By definition, the FIFO (First-In-First-Out) buffer dictates the order in which the data packets are output from the FIFO buffer to the external memory interface for storage in the external memory. That is, a data packet that is stored first in the FIFO buffer will be output first to the external memory interface. Simmons does not teach or suggest that pointer values may be employed in promoting packets in an assigned order.

By contrast, the claimed invention uses a pointer value to denote the relative order in which the beginning of a packet/frame is received (Application, page 16, lines 12-15), not when the packet is completed as in Simmons. Thus, unlike the system in Simmons which orders its packets according to the order in which packets are completed, the claimed invention orders packets according to the order in which the beginning of the packets are originally received. This permits using the pointer values to determine the order in which the corresponding frames are promoted, independent of when packet reception is completed (e.g., frames which arrive first are promoted before frames which, even if completed first, arrived later). (Application, page 16, line 15 to page 17, line 9)

Thus, it is clear that Simmons does not disclose or suggest any mechanism or method in which a pointer value associated with a frame or data packet stored in a receive buffer is used to determine an order in which the respective frame or data packet is sent from the buffer to another device (e.g., output from the buffer to the external memory interface). In fact, because of the nature of the receive FIFO buffer described in Simmons, the data packets

as described in Simmons have to be read out of the receive FIFO buffer in the first-in-first-out manner. This is clearly different and distinguishable from what is claimed in the above-recited element of claim 9.

Furthermore, the use of the frame pointer as described in Simmons is very different and highly distinguishable from what is claimed in the above-recited element of the amended claim 9. As described above, Simmons discloses that the network switch takes a frame pointer from a buffer queue for each received data frame and stores the received data frame in the location in the external memory specified by the frame pointer while a decision making engine determines the appropriate destination ports. Simmons does not disclose or suggest in anyway that the frame pointer as described in Simmons is or could be used to determine the order in which the received data frame is output from the receive FIFO buffer to the external memory interface for storage in the external memory. Again, such a use of frame pointers would not be possible in Simmons because Simmons uses First-In-First-Out receive buffers. In addition, at Col. 9, lines 21-43, Simmons discloses that the frame pointer is assigned to a destination port and that the corresponding data frame pointed to by the assigned frame pointer is fetched from the location in external memory and placed into the appropriate transmit FIFO for transmission. Again, this use of the frame pointer as described in Simmons is not what is claimed in the above-recited element of the amended claim 9. Using the frame pointer to specify the location in the external memory in which a frame is stored or the destination port for the frame is very different and highly distinguishable from using pointer values associated with frames stored in a buffer to determine an order in which the corresponding frames are read out of the buffer.

Because Simmons does not teach or suggest the above-recited element of the amended claim 9, Applicants respectfully submit that claim 9, as amended, is not anticipated or rendered obvious by Simmons. Accordingly, Applicants respectfully request that the rejection of claim 9 be withdrawn.

Since claims 10-14 depend from the amended claim 9 and include additional limitations, Applicants respectfully submit that claims 10-14 are also not anticipated or rendered obvious by Simmons. Withdrawal of the rejections of these claims is therefore respectfully requested.

As to the amended claim 19, Applicants respectfully submit that Simmons does not disclose or suggest the following element for the reasons and explanations provided above with respect to the amended claim 9:

“a network interface, coupled to the buffer and the multi-link trunk, to receive a plurality of data frames from the multi-link trunk, store the frames in the corresponding plurality of records in the buffer, and to assign a pointer value to each of the plurality of records denoting the relative order of frame transmission commencement of each of the plurality of frames, the pointer value associated with each record being used to determine an order in which the corresponding frame is promoted from the buffer to a system state.” (emphasis added)

Because Simmons does not teach or suggest the above-recited element, Applicants respectfully submit that the amended claim 19 is not anticipated or rendered obvious by Simmons. Accordingly, Applicants respectfully request that the rejection of claim 19 be withdrawn.

Since claims 20-22 depend from the amended claim 19 and include additional limitations, Applicants respectfully submit that claims 20-22 are also not anticipated or rendered obvious by Simmons. Withdrawal of the rejections of these claims is therefore respectfully requested.

Summary

Having made the above amendments and remarks, Applicants respectfully submit that all pending claims are in a condition for allowance, which is now earnestly solicited.

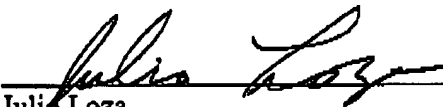
Deposit Account Authorization

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due. Furthermore, if an extension is required, then Applicants hereby request such an extension.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

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Julio Loza
Reg. No. 47,758

12400 Wilshire Boulevard, Seventh Floor
Los Angeles, California 90025
(714) 557-3800